



Fifth Disease (Erythema Infectiosum)

Health Education Facts

What is fifth disease?

Fifth disease, also called *erythema infectiosum* or “slapped cheek disease,” is an infection caused by parvovirus B19. Fifth disease occurs everywhere in the world, especially in school children between ages five and 15. Community outbreaks of fifth disease tend to happen in the late winter and early spring, but there may also be sporadic cases during the year. The name *fifth* comes from the fact this infection was counted among the five classical common infections of childhood.

Studies show that from 40 percent to 60 percent of adults worldwide have laboratory evidence of a past B19 infection, but most of these adults cannot remember having had symptoms. This leads experts to believe most people with a B19 infection have either very mild symptoms or no symptoms at all.

How serious is fifth disease?

Most persons who get fifth disease are not very ill and recover without any serious consequences. However, children with sickle cell anemia, chronic anemia, or an impaired immune system may become seriously ill and require medical care. If a pregnant woman becomes infected with parvovirus B19, the fetus may suffer damage, including the possibility of stillbirth. The woman herself may have no symptoms or a mild illness with rash or joint pains.

What are the symptoms?

Symptoms begin with a mild fever, headache, complaints of tiredness, and mild cold-like symptoms such as a stuffy or runny nose. After a few days, the cheeks take on a flushed appearance that looks like the face has been slapped. The rash quickly spreads as red blotches, extending down to the trunk and to the arms and legs, but usually sparing the palms and soles. As the centers of the blotches begin to clear, the rash takes on a lacy net-like appearance. Not all infected persons develop a rash.

Older children and adults sometimes complain that the rash itches, but most children with a rash caused by fifth disease do not look sick and have no fever. It usually takes one to three weeks for the rash to clear totally, and it may seem to get better or worse at any time during that period. Certain stimuli seem to reactivate the rash, including sunlight, heat, exercise, warm baths, and stress. Other symptoms that are sometimes seen with fifth disease include: swollen glands, red eyes, sore throat, diarrhea, and unusual rashes that look like blisters or bruises.

In some cases, especially in adults and older

teens, an attack of fifth disease may be followed by swelling or pain in the joints. The hands, wrists, knees, and ankles are most often affected.

Some children with specific blood disorders may become significantly ill when they have a B19 infection. Parvovirus B19 temporarily can suppress the body's production of red blood cells, and children who need a high production rate of new blood cells (such as those

with sickle cell anemia) can become severely anemic if their red blood cell production is slowed by the virus. These children can become very pale, with a rapid pulse and abnormally fast breathing. They look sick, have a fever, and are lethargic, but they rarely have the rash seen in fifth disease.

How is fifth disease spread?

B19 spreads from person to person in fluids from the mouth and throat of someone with a B19 infection, especially in large droplets from coughs and sneezes. In households where a child has fifth disease, another family member catches the infection in 15 to 30 percent of cases. Mothers and classmates of children with fifth disease seem to be at special risk of catching the infection.

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A pregnant woman who has a B19 infection may pass the virus to her unborn child. In most cases this causes no lasting problems for the baby, but rarely the fetus may be infected if the mother has the infection during the first trimester.

If an outbreak of fifth disease occurs in the child care setting, notify all parents. Pregnant women and parents of children who have an impaired immune system, sickle cell anemia, or other blood disorders may want to consult their physicians. Make sure that all children and adults use good handwashing techniques.

How is it treated? Can it be prevented?

There is no vaccine for fifth disease, and researchers do not recommend giving immune globulin to those who have been exposed to fifth disease. Since the rash of fifth disease is a reaction of the body's immune system **after** a B19 infection, isolating someone with an fifth disease rash will not prevent spread of the infection. By the time fifth disease rash is obvious, the person usually is not contagious.

Fifth disease is caused by a virus, and it cannot be treated with the antibiotics used to treat bacterial infections. In most cases, fifth disease is such a mild illness that no medicine is necessary, although antihistamines may be prescribed to relieve itchiness.

Usually, children with fifth disease feel fairly well and need little home treatment. Since the fifth disease infection is typically identified by its rash, after fever and mild cold symptoms have passed, there may be little to treat except any discomfort from the rash itself. If your child has itching from the rash of fifth disease, ask your doctor about which lotions or creams might best relieve the discomfort.

How long is a person contagious?

The incubation period for fifth disease ranges from four to 28 days, with an average of 16 to 17 days. Persons with fifth disease can spread the virus in fluids from their mouth, beginning seven to 11 days after they have been exposed. This contagious period falls either during the incubation period or when they have only mild respiratory symptoms, but before the rash.